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| 10/823,225      | 04/13/2004  | Brian T. Edgar       | STL11600            | 4622             |

7590  
Seagate Technology LLC  
1280 Disc Drive  
Shakopee, MN 55379

11/15/2007

EXAMINER

TRUONG, LOAN

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2114

|           |               |
|-----------|---------------|
| MAIL DATE | DELIVERY MODE |
|-----------|---------------|

11/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/823,225

Applicant(s)

EDGAR ET AL.

Examiner

LOAN TRUONG

Art Unit

2114

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 12-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-10 and 12-18 is/are allowed.
- 6) ☒ Claim(s) 19-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. This Office action is in respond to applicant's amendment filled August 20, 2007 in application #10/823,225.
2. Claims 1, 3-10, 12-22 are presented for examination. Claims 1, 3-4, 10, 12-13 have been amended. Claims 2 and 11 are cancelled.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 19-22 have been considered but are moot in view of the new ground(s) of rejection.

### ***Allowable Subject Matter***

4. Claims 1, 3-10 and 12-18 are allowed.

The following is an examiner's statement of reasons for allowance: The examiner deem claim 22 as novel when read as a whole for the limitations of programming the sequencer to interrupt a co-processor before executing the command and when executing a set of instruction comprises reprogramming the sequencer so that it is prevented from entering a reselection phase to re-establish a connection across the small computer system interface bus.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 19 is rejected under 35 U.S.C. 102(e) as being anticipated by Hartnett et al. (US 6,751,756).

In regard to claim 19, Hartnett et al. disclosed a method comprising:

receiving a command to generate a false data miscompare error (*parity error injection circuit allows parity errors to be selectively injected into the instruction stream based on indicators which are programmed from a maintenance controller, fig. 7, 200, 202*);

reading data from a storage medium into a memory (*instructions are provided from the Read Buffer to the First level Cache, fig. 7, 41, 38*);

changing at least some of the data in the memory to form corrupted data (*Parity Error Injection Circuit between the Read Buffer and the First level Cache, fig. 7, 200*); and

passing the corrupted data as the data read from the storage medium (*parity errors are selectively injected into the instructions as they are "copied back" to the First level Cache, fig. 7, 41, 200, 38*).

\*\*\*\*\*

6. Claims 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Gender et al. (US 2003/0226062).

In regard to claim 20, Gender et al. disclosed a method comprising:

receiving an indication that a false timeout error should be generated during execution of a command (*uncorrectable EDAC error is emulated by changing EDAC check bits during operation with several types of asynchronous error creating code sequences ex: watchdog time out error by injecting an infinite loop into the object code of the application software, paragraph 0043-0045*);

receiving the command (*the error response test program inserts the EB FE string into the location of the application object code, paragraph 0045*);

processing a portion of the command (*modified application is then run and is caught in the infinite loop, paragraph 0045*); and

stopping the processing of the command before completing the command without indicating that processing of the command has stopped (*when the application is caught in the infinite loop it will cause the watchdog time interrupt to activate and abandon its current control flow, paragraph 0045*).

In regard to claim 21, Gender et al. disclosed the method of claim 20 wherein receiving a command comprises receiving a read command and wherein processing a portion of the command comprises transferring data (*load application into memory for test, provide error*

*creation object code sequence, insert error creation object code sequence into application and force application through modified code path, fig. 4).*

In regard to claim 22, Gender et al. disclosed the method comprising:

receiving a command at a storage device to generate a false error, the command comprising at least one sense parameter (*error response test program injects errors into the application under test by inserting code sequences of application code that are desired to create an error in the application under test, paragraph 0031, where each different type of code sequence produces a different type of asynchronous error, paragraph 0038*);

generating a false error message from the storage device that indicates that an error has occurred when it has not occurred, the false error message describing the error in part by including the at least one sense parameter (*error creation code includes a watchdog timeout sequence, an unhandled software exception sequences, a bus exception sequence, and unhandled interrupt sequence, an uncorrectable EDAC error sequence, paragraph 0038*).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Loan Truong whose telephone number is (571) 272-2572. The examiner can normally be reached on M-F from 8am-4pm.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Scott Baderman can be reached on (571) 272-3644. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SCOTT BADERMAN  
SUPERVISORY PATENT EXAMINER